

CLAIMS:

1. A finger follower for use in an engine, the finger follower comprising:
a main body including spaced apart first and second walls, the first wall
defining a first aperture therein and the second wall defining a second aperture therein, the
5 first and second apertures each having an inner diameter less than or equal to a first
diameter;
a shaft assembly having a first portion positionable between the walls and
having a second, outer diameter that is larger than the first diameter, the shaft assembly
including secondary portions extending from the first portion and configured to be
10 received in the first and second apertures; and
a cam follower positioned in the body between the first and second walls
and rotatable about the shaft assembly first portion.
2. The finger follower as claimed in claim 1, wherein the first and second
15 apertures both have a diameter equal to the first diameter.
3. The finger follower as claimed in claim 1, wherein the first portion is
rotatable with respect to the main body, and the secondary portions are not rotatable with
respect to the main body.
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4. The finger follower as claimed in claim 1, wherein the first portion and the
secondary portions are rotatable together with respect to the main body.
5. The finger follower as claimed in claim 1, wherein the first portion and the
25 secondary portions are not rotatable with respect to the main body and the cam follower is
rotatable with respect to the first portion and the secondary portions.
6. The finger follower as claimed in claim 1, wherein the first portion and the
secondary portions are rotatable with respect to each other and with respect to the main
30 body.
7. The finger follower as claimed in claim 1, wherein the first portion is a

hollow shaft defining a shaft aperture therethrough and the secondary portions are ends of a solid shaft, the solid shaft being received in the shaft aperture.

8. The finger follower as claimed in claim 1, wherein the first portion and the
5 secondary portions are integrally formed.

9. The finger follower as claimed in claim 1, wherein the first diameter is less than or equal to about ninety percent of the second diameter.

10. The finger follower as claimed in claim 1, wherein the first diameter is less than or equal to about seventy-five percent of the second diameter.

11. The finger follower as claimed in claim 1, wherein the first diameter is less than or equal to about fifty-percent of the second diameter.

12. The finger follower as claimed in claim 1, wherein the first diameter is less than or equal to about thirty percent of the second diameter.

13. The finger follower as claimed in claim 1, wherein the cam follower has a
20 cam follower outer diameter, the first diameter being between about ten percent and about twenty-five percent of the outer diameter of the cam follower.

14. The finger follower as claimed in claim 1, wherein the secondary portions are substantially concentric with the first portion and the first portion is substantially
25 concentric with the cam follower.

15. The finger follower as claimed in claim 1, wherein the cam follower has a first width and the shaft assembly first portion has a second width less than or equal to the first width.

16. The finger follower as claimed in claim 1, wherein the cam follower includes an outer ring having an inner surface with an anti-friction means associated with the outer ring inner surface.

17. The finger follower as claimed in claim 16, wherein the anti-friction means includes a plurality of rolling elements positioned along the outer ring inner surface.

18. The finger follower as claimed in claim 16, wherein the anti-friction means
5 includes an anti-friction coating applied to the outer ring interior surface.

19. The finger follower as claimed in claim 16, wherein the anti-friction means includes a non-metallic anti-friction ring positioned within the outer ring.

10 20. The finger follower as claimed in claim 1, wherein the secondary portions each include an enlarged head portion, the enlarged head portions engageable with the first and second side walls to prevent the secondary portions from substantial lateral movement with respect to the main body.

15 21. The finger follower as claimed in claim 20, wherein the enlarged head portions are substantially flush with outer surfaces of the first and second walls.

22. The finger follower as claimed in claim 1, wherein the cam follower has an outer diameter and defines a cam follower aperture defining an inner diameter of the cam
20 follower, the first portion defining a shaft aperture therethrough, which defines an inner diameter of the first portion, and the secondary portions having a third diameter, and wherein the second diameter is substantially complementary to the inner diameter of the cam follower, and wherein the inner diameter of the first portion, the first diameter and the third diameter are substantially complementary to each other.

25 23. A method of assembling a finger follower, the method comprising:
providing a main body including a first wall having a first aperture defined therein and a second wall having a second aperture defined therein, the first and second walls being spaced apart from one another;
30 providing a cam follower having a cam follower aperture therethrough;
positioning a hollow shaft, having a shaft aperture therethrough, in the cam follower aperture;

positioning the cam follower and the hollow shaft between the first and second walls with the shaft aperture aligned with the first and second apertures; and positioning a second shaft through the aligned first aperture, shaft aperture, and second aperture.

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24. The method as claimed in claim 23, further comprising the step of securing the second shaft with respect to the first and second walls.

25. A method of assembling a finger follower, the method comprising:
10 providing a main body including a first wall having a first aperture defined therein and a second wall having a second aperture defined therein, the first and second walls being spaced apart from one another and the first and second apertures each having an inner diameter less than or equal to a first diameter;
providing a cam follower having a cam follower aperture therethrough;
15 providing a shaft assembly including a first portion having a second diameter larger than the first diameter and secondary portions extending from the first portion;
positioning the first portion in the cam follower aperture; and
positioning the secondary portions in the respective first and second
20 apertures such that the shaft assembly is supported by the first and second walls.

26. The method as claimed in claim 25, wherein the first portion is a hollow shaft defining a shaft aperture therethrough and the secondary portions are ends of a solid shaft, the step of inserting the secondary portions includes inserting the solid shaft through
25 the first and second apertures and the shaft aperture.

27. The method as claimed in claim 25, further comprising the step of securing the second portions with respect to the first and second walls.